Commonwealth of Kentucky
Environmental and Public Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382

AIR QUALITY PERMIT
Issued under 401 KAR 52:040

Permittee Name:	**Louisville Forge & Gear Works, LLC**
Mailing Address:	**596 Triport Road** **Georgetown, KY 40324**
Source Name:	**Louisville Forge & Gear Works, LLC**
Mailing Address:	**596 Triport Road** **Georgetown, KY 40324**
Source Location:	**596 Triport Road, Georgetown, KY 40324**
Permit Number:	**S-00-040 Revision 2**
Source A. I. #:	**3916**
Activity #:	**APE20040001**
Review Type:	**State Origin**
Source ID #:	**21-209-00043**
Regional Office:	**Frankfort Regional Office** **643 Teton Trail, Suite B** **Frankfort, KY 40601-1758** **(502) 564-3358**
County:	**Scott**
Application Complete Date:	**June 3, 2005 (Revision 2)**
Issuance Date:	**May 12, 2000**
Revision Date:	**October 20, 2005**
Expiration Date:	**May 12, 2010**

E-Signed by Diana Andrews
VERIFY authenticity with ApproveIt

John S. Lyons, Director
Division for Air Quality

Revised 10/19/05

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction and operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first having submitted a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:040, State-origin permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals that may be required by this Cabinet or any other federal, state, or local agency.

PERMIT MODIFICATIONS: The following is a log showing the history of this permit and its modifications

Rev #	Permit type	Log #	Complete Date	Issuance Date	Summary of Action
----	Initial Issuance	G309	01/18/00	05/12/00	Initial Issuance
1	Minor modification	54132	10/02/01	11/09/01	Addition of new equipment
2	Significant revision	APE200 40001	06/03/05	10/20/05	Restructure of permit Addition of new 22 Wheelabrator Addition of Line 2 – Sinter Forge

Definitions: The following definitions apply to all abbreviations and variables used in this permit:

Mn – manganese
PT – total particulate matter
PM10 – particulate matter equal to or smaller than 10 micrometers
CO – carbon monoxide
NO_x – nitrogen oxides
SO_2 – sulfur dioxide
Pb – lead
VOC – volatile organic compounds

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

GROUP 01:

01 Natural Gas-Fueled Heating Units

Description: The equipment contained in this group provides heating for production processes and heat-treating. Annual hours of operation for all equipment: 8760.

101 Steel bar pre-heater furnace for the 1300T Sheer (Asset # 935)
Natural gas fueled with rated capacity of 7.392 MMBtu/hr.
Construction commenced: September 1996

102 Steal bar pre-heater furnace for the 1000T Sheer (Asset #887)
Natural gas fueled with rated capacity of 15.225 MMBtu/hr.
Construction commenced: July 1998

103 Steel bar pre-heater furnace for 1300T Shear [Asset #1575(in reserve, not active)]
Natural gas fueled with rated capacity of 7.16 MMBtu/hr.
Construction commenced: 1995

104 Draw Furnace – Holcroft model (Assest #40)
Natural gas fueled with a rated capacity of 7.16 MMBtu/hr.
Construction commenced: 1995

105 Normalizer – Holcroft model (Asset #256)
Natural gas fueled with a rated capacity of 7.16 MMBtu/hr
Construction commenced: 1995

106 Normalizer – Holcroft model (Asset #266)
Natural gas fueled with a rated capacity of 7.16 MMBtu/hr
Construction commenced: 1995

107 Sinter Rotary Furnace (Asset #154)
Natural gas fueled with a rated capacity of 85,800 Btu/hr
Construction commenced: 2001

108 Sinter Rotary Furnace
Natural gas fueled with a rated capacity of 38,500 Btu/hr
Construction commences: October 2005

109 RX Gas Generator - Koyo Thermo Systems EN-4000MT model (Asset #161)
Natural gas fueled with rated capacity of 0.205 MMBtu/hr
Construction commences: October 2001

110 RX Gas Generator - Koyo Thermo Systems EN-4000MT model
Natural gas fueled with rated capacity of 0.205 MMBtu/hr
Construction commences: October 2005

Emission Sources:	**Combined Throughput**	**Pollutants**
Natural Gas	51.381 MMbtu/hr	PT, PM10, CO, NOx, SO_2, VOC

APPLICABLE REGULATIONS:
401 KAR 59:015, New indirect heat exchangers.

1. **Operating Limitations:** N/A

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

GROUP REQUIREMENTS: Group 1 (continued)

2. Emission Limitations:

a. For liquid and gaseous fuels combustion in each heater **and** each emission point with a total heat input capacity of 10 million Btu/hour or less:
   i. The particulate emission shall not exceed 0.56 pound/million Btu of actual heat input,
   ii. The sulfur dioxide emission shall not exceed 3.0 pounds/million Btu of actual heat input.

b. For liquid and gaseous fuels combustion in each heater **and** each emission point with a total heat input capacity of more than 10 million Btu/hour but less than 250 million Btu/hour:
   i. The particulate emission shall not exceed the standard calculated by the following equation:

$$E = 0.9634 \cdot THIC^{-0.2356}$$

   ii. The sulfur dioxide emission shall not exceed the standard calculated by the following equation:

$$E = 7.7223 \cdot THIC^{-0.4106}$$

   where E is in pounds/million Btu actual heat input, and $THIC$ is the total heat input capacity in millions of Btu/hour.

c. Visible emissions shall not exceed 20% opacity, as determined with Reference Method 9, Appendix A of 40 CFR 60.

   COMPLIANCE DEMONSTRATION:
   While burning natural gas, each unit is considered to be in compliance with particulate matter, sulfur dioxide and opacity standards.

3. Testing Requirements: N/A

4. Monitoring Requirements:
The permittee shall monitor the daily hours of operation and the daily amounts and types of process fuels combusted in each heater at each emission point.

5. Recordkeeping Requirements:
Daily records shall be maintained of the total fuel input and hours of operation of each heater at each emission point.

6. Reporting Requirements:
N/A

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

GROUP 02:

02 Shot Blast / Shot Peen / Wheelabrator Equipment

Description: All of this process equipment is used to clean production products. Each is a self- contained process and has a positive pressure fabric filter baghouse. The units cannot function unless the filter is in place. The dust collector and filter with each unit has an efficiency of 99.5% for controlling PM_{10} and PT emissions. Annual hours of operation for all equipment: 8760.

201 Crankshaft shot blast and dust collector – Blast Cleaning Products model (Asset #884)
Cartridge Filter – 99.5% efficient Farr Tenkay Mark IV 7000-16D-T3 (Asset #926)
Construction commenced: 1996

202 Super 28 Wheelabrator and dust collector - Super Tumblast II model (Asset #263)
Cartridge Filter – 99.5% efficient Farr Tenkay Mark IV 8000-8D-T3 (Asset #929)
Construction commenced: 1996

203 34 shot blast and dust collector - Blast Cleaning Products model (Asset #885)
Cartridge Filter – 99.5% efficient Farr Tenkay Mark IV 7000-16D-T3 (Asset #909)
Construction commenced: 1995

204 GM insp. line shot blast and dust collector – Goff 60" Table Blast Machine (Asset #2)
Cartride Filter – 99.5% efficient Geo. Fischer Model 1816 FILTER (Asset #927)
Construction commenced: 1996

205 Toyota inspection line shot blast and dust collector – Blast Cleaning Products Model ST-121 Shot Blast Machine (Asset #1787)
Cartridge Filter – 99.5% efficient Farr Tenkay Mark IV 7000-16D-T3 (Asset #1797)
Construction commenced: 1996

206 Super 22 Wheelabrator and dust collector – Super Tumblast model (Asset #241)
Cartridge Filter – 99.5% efficient Farr Tenkay Mark IV 3000-16D-T3 (Asset #930)
Construction commenced: 1998

207 Sinter's shot peen and dust collector – Line 1 (Asset # 1749)
Cartridge Filter: (Asset #1752)
Construction commenced: 2001

208 Sinter's shot peen and dust collector – Line 2 (Asset #1758)
Cartridge Filter: (Asset #1759)
Construction commenced: 2001

209 TBR 6 Wheelabrator and Torit dust collector (Asset #1840)
Cartridge Filter: (Asset #1842)
Construction commenced: 2004

210 Super 22 Wheelabrator and dust collector – Super Tumblast model (Asset #1845)
Cartridge Filter – 99.5% efficient Farr Tenkay Mark IV 3000-16D-T3 (Asset #1846)
Construction commences: 2005

Emission Sources:	Max Throughputs:	Pollutants
Shot blast/peen	51.023 pounds/hr	PT, PM10, MN

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

GROUP REQUIREMENTS: Group 2 (continued)

APPLICABLE REGULATIONS:

401 KAR 59:010, New process operations.
401 KAR 63:020, Potentially hazardous matter or toxic substances.

1. **Operating Limitations:**
   The permittee shall comply with operating standard in 401 KAR 63:020 Section 3.

2. **Emission Limitations:**
   a. Visible emissions shall not equal or exceed 20% opacity, as determined by Reference Method 9 of Appendix A to 40 CFR 60, filed by reference in 401 KAR 59:010.

   b. Hourly particulate emissions, as determined by Reference Method 5 of Appendix A to 40 CFR 60, shall not exceed the limit calculated by the following equation:

   $$E = 3.59 \cdot P^{0.62}$$

   where E is in pounds/hour, and P is the process weight rate (total weight of all materials introduced into the emission unit, which may cause particulate matter emissions) in tons/hour.

   COMPLIANCE DEMONSTRATION METHODS:
   1. To provide reasonable assurance that the visible emission limitations are being met, the permittee shall perform the following:
      a. Qualitative observations of the visible emissions shall be made weekly and a log of the observations shall be maintained to include the following:
         i. Any air emissions (except for water vapor) that were visible from stack or vent.
         ii. All emission points from which visible emissions occurred.
      b. If visible emissions from the stack are observed, the permittee shall perform a Method 9 reading. If no visible emissions are observed no further monitoring is required at that time.
   2. To provide reasonable assurance that the particulate matter emission limitations are being met, the permittee shall monitor the amounts and types of raw materials processed. Particulate emissions from each emission point shall be calculated as follows:

      Particulate emissions, in pounds/hour = $\sum$ [(Maximum process weight rate of each raw material, in tons/month) x (hours/month) x (KYEIS particulate emission factor for the raw material, in pounds/ton) x (1 - particulate control efficiency, in % / 100)]

3. **Testing Requirements:**
   N/A

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

GROUP REQUIREMENTS: Group 2 (continued)

4. **Monitoring Requirements:**
   The permittee shall monitor the daily hours of operation and the total daily input of all raw materials of each process unit at each emission point. Also, see the compliance demonstration method, above, for visible emissions monitoring.

5. **Recordkeeping Requirements:**
   Daily records shall be maintained of the total input of all raw materials and hours of operation of each process unit at each emission point.

6. **Reporting Requirements:**
   Any exceedance of the opacity or particulate emission limits as stated in this permit shall be reported to the Division within 30 days of the exceedance as specified in the General Conditions Section C.1.b.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

GROUP REQUIREMENTS:

03 Hot Forging Operation

Description: Each of the process points in this group is a main die forging press. Four of the presses have a wet scrubber with an efficiency of 99.9% to control PM10 and PT emissions. Each press may use either a graphite lubricant or synthetic graphite lubricate, depending upon the nature of the product being forged, to keep the parts from sticking in the dies as well as to protect the dies. Annual hours of operation for all equipment: 8760.

301 700 Ton Screw Press – National (Asset #1823)
Construction commenced: 2005
302 1600 ton press – Maxi National forge press (Asset #178)
Construction commenced: 1996
303 2500 ton press – #25C Ajax forge press (Asset #177)
Construction commenced: 1996
304 4000 ton press – Maxi National forge press (Asset #870)
Construction commenced: 1996
305 8000 ton presses A&B D – Dual model HMPT-96 (Assets #209, 852)
Scrubber – 99.9% efficient (Asset #1120)
Construction commenced: 1996
306 6000 ton presses C&D – Dual model HMPT-96 (Assets #861, 216)
Scrubber – 99.9% efficient (Asset #1125)
Construction commenced: 1996

Emission Sources:	**Max Throughputs:**	**Pollutants**
Graphite Lube	108.63 pounds/hr	PT
Synthetic Graphite Lube	43.27 pounds /hr	PT

APPLICABLE REGULATIONS:
401 KAR 59:010, New process operations.
401 KAR 63:010, Fugitive emissions

1. **Operating Limitations:**
   The permittee shall comply with operating standard in 401 KAR 63:010, Fugitive Emissions, Section 3.

2. **Emission Limitations:**
   a. Visible emissions shall not equal or exceed 20% opacity, as determined by Reference Method 9 of Appendix A to 40 CFR 60, filed by reference in 401 KAR 59:010.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

GROUP REQUIREMENTS: Group 3 (continued)

b. Hourly particulate emissions, as determined by Reference Method 5 of Appendix A to 40 CFR 60, shall not exceed the limit calculated by the following equation:

$$E = 3.59 \cdot P^{0.62}$$

where E is in pounds/hour, and P is the process weight rate (total weight of all materials introduced into the emission unit, which may cause particulate matter emissions) in tons/hour.

COMPLIANCE DEMONSTRATION METHODS:

1. To provide reasonable assurance that the visible emission limitations are being met, the permittee shall perform the following:
   a. Qualitative observations of the visible emissions shall be made weekly and a log of the observations shall be maintained to include the following:
      i. Any air emissions (except for water vapor) which were visible from stack or vent.
      ii. All emission points from which visible emissions occurred, and
   b. If visible emissions from the stack are observed the permittee shall perform Method 9 readings. If no visible emissions are observed, no further monitoring is required at that time.
2. To provide reasonable assurance that the particulate matter emission limitations are being met, the permittee shall monitor the amounts and types of raw materials processed. Particulate emissions from each emission point shall be calculated as follows:
   Particulate emissions, in pounds/hour = $\sum$ [(Maximum process weight rate of each raw material, in tons/month) x (hours/month) x (KYEIS particulate emission factor for the raw material, in pounds/ton) x (1 - particulate control efficiency, in % / 100)]

3. Testing Requirements:
N/A

4. Monitoring Requirements:
The permittee shall monitor the daily hours of operation and the total daily input of all raw materials of each process unit at each emission point. Also see the compliance demonstration method, above, for visible emissions monitoring.

5. Recordkeeping Requirements:
Daily records shall be maintained of the total input of all raw materials and hours of operation of each process unit at each emission point.

6. Reporting Requirements:
Any exceedance of the opacity or particulate emission limits as stated in this permit shall be reported to the Division within 30 days of the exceedance as specified in the General Conditions Section C.1.b.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

GROUP REQUIREMENTS:

04 Powdered Forging Operation

Description: The emission points are the forming press and the main die forging press. The forming press then forms the powered metal into the product shape. In the main forging press synthetic graphite lubricate is used to keep the parts from sticking in the dies as well as to protect the dies. Annual hours of operation for all equipment: 8760.

401 400 ton forming press for Line 1 (Asset # 1730)
Installation commenced: 2004
402 1600 ton forging press for Line 1 (Asset #1740)
Installation commenced: 2004
403 400 ton forging press for Line 2
Installation commences: 2006
404 1600 ton forging press for Line 2
Installation commences: 2006

Emission Sources:	Max Throughputs:	Pollutants
Powered Metal	800 lb/hr (per Line)	PT
Synthetic Graphite Lube	1.62 lb/hr (per Line)	PT

APPLICABLE REGULATIONS:

401 KAR 59:010, New process operations.
401 KAR 63:010, Fugitive Emissions
401 KAR 63:020, Potentially hazardous matter or toxic substances.

1. **Operating Limitations:** N/A

2. **Emission Limitations:**
   a. Opacity Standard: Section 3 (1), visible emissions from stacks or vents exiting the facility building shall not equal or exceed 20 percent opacity, as determined with Reference Method 9, Appendix A 40 CFR 60. No opacity standard shall apply for stacks vented inside the facility building.

   Compliance demonstrations: The permittee shall demonstrate compliance through monitoring and maintenance of the records as specified in points 4. **Specific Monitoring Requirements** and by maintaining records as specified in number 5. **Specific Record Keeping Requirements,** below.

   b. Mass Emission Standard for particulate emissions from all emission points: Section 3 (2), the averaged hourly particulate emissions for each emission point as measured by Reference Method 5, Appendix A 40 CFR 60, shall not exceed the limit calculated by the following equation:

$$E = 3.59 \cdot P^{0.62}$$

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

GROUP REQUIREMENTS: Group 4 (continued)

Where E is the particulate emission in lbs/hour and P is the process weight (i.e. the maximum amount of solid scraps/wastes produced or maximum amount of output product) in tons/hour. If the process weight is less than or equal to 0.5 ton/hour, the particulate matter emission limitation shall be 2.34 lbs/hour.

Compliance demonstrations: The process weight shall be determined in hourly tons by averaging the monthly process weight over monthly hours of operation. Particulate emissions shall be calculated by the following equation:

Particulate emissions, in pounds/hour = $\sum$ [(Maximum averaged process weight of each raw material, in tons/hour) x (KYEIS particulate emission factor for the raw material, in pounds/ton) x (1 – particulate control efficiency, in % / 100)]

Where E is particulate emissions in lbs/hr, P is averaged processed weight in tons/hr and EF is the KYEIS particulate emission factor in lbs/ton of process weight.

3. **Testing Requirements:**
Pursuant to Regulations 401 KAR 59:005 Section 2 (2) and 401 KAR 50:045 Section 1, performance testing using the Reference methods specified in Regulations 401 KAR 50:015 shall be conducted as required by the Division.

4. **Specific Monitoring Requirements:**

   a. The permittee shall monitor the relevant operating parameters, including but not limited to:

      i. The maximum daily throughputs of each of the above-named particulate emission sources.

      ii. The daily hours of operation of each particulate emission unit in each emission and/or process point.

      iii. The daily hours of operation and any periods of malfunction of the controlled equipment attached to each of the above-named emission source.

   b. The permittee shall install, calibrate, maintain and operate according to manufacturer's specification, a monitoring device (flow meter) to maintain the correct pressure in the scrubbers of the hot forge.

   c. To provide reasonable assurance that the visual emission limitations are being met, the permittee shall survey the emission unit for visible emissions once a month and maintain a log of observations.

      i. Any air emissions (except for water vapor) that are visible from stack or vent.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

GROUP REQUIREMENTS: Group 4 (continued)

ii. All emission points and/or process points from which visible emissions occurred. If visible emissions from the stack are observed, the permittee shall perform a Method 9 reading.

iii. If visible emissions of less than 20% opacity are observed then no further monitoring is required.

iv. If visible emissions of greater than 20% are observed and believed to exceed the applicable standard, the permittee shall follow facility procedures to initiate a maintenance inspection and make any necessary repairs, and another visual inspection will be performed after the maintenance inspection.

v. A representative of the permittee that is or has been certified in Visible Emission Evaluations shall perform the reading.

vi. The permittee shall maintain a list of all individuals that is or has been certified Visible Emissions Evaluators and the date of certification.

5. **Specific Recordkeeping Requirements:**
The permittee shall maintain records of the relevant operating parameters, including but limited to:

   a. The maximum daily throughputs of each of the above-named emission sources.

   b. The daily hours of operation of the emission source and/or production points and any periods of malfunction of each control device.

   c. The parameters monitored pursuant to 4.b and 4.c in **Specific Monitoring Requirements** above.

6. **Specific Reporting Requirements:**
Any exceedance of the opacity, particulate or toxic emission limits as stated in this permit shall be reported to the Division within 30 days of the exceedance as specified in the General Conditions Section D.1.b.

7. **Specific Control Equipment Operation Conditions:**
The permittee shall install, properly maintain, and operate the control equipment in accordance with manufacturer's guidelines.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

GROUP REQUIREMENTS:

05 Warm Forging Operation

Description: The emission point is the main die forging press. A synthetic graphite lubricate is used to keep the parts from sticking in the dies as well as to protect the dies. The press has a wet scrubber with an efficiency of 99.9% to control PM10 and PT emissions. Annual hours of operation for all equipment: 8760.

501 Warm forging Press and scrubber (Assets #1768, 1722)

Emission Sources:	Max Throughputs:	Pollutants
Synthetic Graphite Lube	.823 gal/hr	PT

APPLICABLE REGULATIONS:

401 KAR 59:010, New process operations.
401 KAR 63:020, Potentially hazardous matter or toxic substances.

1. **Operating Limitations:** N/A

2. **Emission Limitations:**
   a. Opacity Standard: Section 3 (1), visible emissions from stacks or vents exiting the facility building shall not equal or exceed 20 percent opacity, as determined with Reference Method 9, Appendix A 40 CFR 60. No opacity standard shall apply for stacks vented inside the facility building.

   Compliance demonstrations: The permittee shall demonstrate compliance through monitoring and maintenance of the records as specified below in **4. Specific Monitoring Requirements** and by maintaining records as specified in **5. Specific Record Keeping Requirements**.

   b. Mass Emission Standard for particulate emissions from all emission points: Section 3 (2), the averaged hourly particulate emissions for each emission point as measured by Reference Method 5, Appendix A 40 CFR 60, shall not exceed the limit calculated by the following equation:

$$E = 3.59 \bullet P^{0.62}$$

   Where E is the particulate emission in lbs/hour and P is the process weight (i.e. the maximum amount of solid scraps/wastes produced or maximum amount of output product) in tons/hour. If the process weight is less than or equal to 0.5 ton/hour, the particulate matter emission limitation shall be 2.34 lbs/hour.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

GROUP REQUIREMENTS: Group 5 (continued)

Compliance demonstrations: The process weight shall be determined in hourly tons by averaging the monthly process weight over monthly hours of operation. Particulate emissions shall be calculated by the following equation:

Particulate emissions, in pounds/hour = ∑ [(Maximum averaged process weight of each raw material, in tons/hour) x (KYEIS particulate emission factor for the raw material, in pounds/ton) x (1 – particulate control efficiency, in % / 100)]

Where E is particulate emissions in lbs/hr, P is averaged processed weight in tons/hr and EF is the KYEIS particulate emission factor in lbs/ton of process weight.

3. **Testing Requirements:**
Pursuant to Regulations 401 KAR 59:005 Section 2 (2) and 401 KAR 50:045 Section 1, performance testing using the Reference methods specified in Regulations 401 KAR 50:015 shall be conducted as required by the Division.

4. **Specific Monitoring Requirements:**

   a. The permittee shall monitor the relevant operating parameters, including but not limited to:

      i. The maximum daily throughputs of each of the above-named particulate emission sources.

      ii. The daily hours of operation of each particulate emission unit in each emission and/or process point.

      iii. The daily hours of operation and any periods of malfunction of the control equipment associated with each of the above-named emission sources.

   b. The permittee shall install, calibrate, maintain and operate according to manufacturer's specification, a monitoring device (flow meter) to maintain the correct pressure in the scrubbers of the hot forge.

   c. To provide reasonable assurance that the visual emission limitations are being met, the permittee shall survey the emission unit for visible emissions once a month and maintain a log of observations.

      i. Any air emissions (except for water vapor) that are visible from stack or vent.

      ii. All emission points and/or process points from which visible emissions occurred. If visible emissions from the stack are observed, the permittee shall perform a Method 9 reading.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

GROUP REQUIREMENTS: Group 5 (continued)

iii. If visible emissions of less than 20% opacity are observed then no further monitoring is required.

iv. If visible emissions of greater than 20% are observed and believed to exceed the applicable standard, the permittee shall follow facility procedures to initiate a maintenance inspection and make any necessary repairs, and another visual inspection will be performed after the maintenance inspection.

v. A representative of the permittee that is or has been certified in Visible Emission Evaluations shall perform the reading.

vi. The permittee shall maintain a list of all individuals that is or has been certified Visible Emissions Evaluators and the date of certification.

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the relevant operating parameters, including but not limited to:

a. The maximum daily throughputs of each of the above-named emission sources.

b. The daily hours of operation of the emission source and/or production points and any periods of malfunction of each control device.

c. The parameters monitored pursuant to 4.b and 4.c in **Specific Monitoring Requirements,** above.

6. Specific Reporting Requirements:

Any exceedance of the opacity, particulate or toxic emission limits as stated in this permit shall be reported to the Division within 30 days of the exceedance as specified in the General Conditions Section D.1.b.

7. Specific Control Equipment Operating Conditions:

The permittee shall install, properly maintain, and operate the control equipment in accordance with manufacturer's guidelines.

SECTION C – GENERAL REQUIREMENTS

A. Administrative Requirements

1. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:040, Section 3(1)(b) and is grounds for enforcement action including but not limited to the termination, revocation and re-issuance, or revision of this permit.

2. This permit shall remain in effect for a fixed term of ten (10) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:040, Section 15].

3. Any condition or portion of this permit that becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Material incorporated by reference by 401 KAR 52:040, Section 1a, 11].

4. Pursuant to materials incorporated by reference by 401 KAR 52:040, this permit may be revised, revoked, reopened, reissued, or terminated for cause. The filing of a request by the permittee for any permit revision, revocation, re-issuance, or termination, or of a notification of a planned change or anticipated noncompliance shall not stay any permit condition [Material incorporated by reference by 401 KAR 52:040, Section 1a, 4, 5].

5. This permit does not convey property rights or exclusive privileges [Material incorporated by reference by 401 KAR 52:040, Section 1a, 8].

6. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:040 Section 11(3)].

7. All previously issued permits to this source at this location are hereby null and void.

B. Recordkeeping Requirements

1. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of at least five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [401 KAR 52:040 Section 3(1)(f)].

SECTION C – GENERAL REQUIREMENTS (CONTINUED)

2. The permittee shall perform compliance certification and recordkeeping sufficient to assure compliance with the terms and conditions of the permit. Documents, including reports, shall be certified by a responsible official pursuant to 401 KAR 52:040, Section 21.

C. Reporting Requirements

1. a. In accordance with the provisions of 401 KAR 50:055, Section 1, the permittee shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
   i. When emissions during any planned shutdowns and ensuing startups will exceed the standards notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
   ii. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards notification shall be made as promptly as possible by telephone (or other electronic media) and shall submit written notice upon request.

   b. The permittee shall promptly report deviations from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Reporting Requirement condition 1a above), the probable cause of the deviation, and corrective or preventive measures taken; to the Regional Office listed on the front of this permit within 30 days. Other deviations from permit requirements shall be included in the semiannual [Material incorporated by reference by 401 KAR 52:040, Section 5, 3].

2. The permittee shall furnish information requested by the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the permit [Material incorporated by reference by 401 KAR 52:040, Section 1a, 6].

3. Summary reports of monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation.

   The summary reports are due January 30th and July 30th of each year. All deviations from permit requirements shall be clearly identified in the reports. All reports shall be certified by a responsible official pursuant to 401 KAR 52:040, Section 21.

SECTION C – GENERAL REQUIREMENTS (CONTINUED)

D. Inspections

1. In accordance with the requirements of 401 KAR 52:040, Section 3(1)(f) the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times. Reasonable times are defined as during all hours of operation, during normal office hours; or during and emergency:

   a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation.

   b. To access and copy any records required by the permit.

   c. Inspect, at reasonable times, any facilities, equipment (including monitoring and pollution control equipment), practices, or operations required by the permit.

   d. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

E. Emergencies/Enforcement Provisions

1. The permittee shall not use as defense in an enforcement action, the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Material incorporated by reference by 401 KAR 52:040, Section 1a, 3].

2. An emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
   i. An emergency occurred and the permittee can identify the cause of the emergency;
   ii. The permitted facility was at the time being properly operated;
   iii. During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
   iv. The permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division within two working days after the time when emission limitations were exceeded due to the emergency and included a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.

3. Emergency provisions listed in General Condition E.2 are in addition to any emergency or upset provision contained in an applicable requirement [401 KAR 52:040, Section 22(1)].

4. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [401 KAR 52:040, Section 22(2)].

SECTION C – GENERAL REQUIREMENTS (CONTINUED)

F. Compliance

1. Periodic testing or instrumental or non-instrumental monitoring, which may consist of record keeping, shall be performed to the extent necessary to yield reliable data for purposes of demonstration of continuing compliance with the conditions of this permit.

   For the purpose of demonstration of continuing compliance, the following guidelines shall be followed:
   a. Pursuant to 401 KAR 50:055, General compliance requirements, Section 2(5), all air pollution control equipment and all pollution control measures proposed by the application in response to which this permit is issued shall be in place, properly maintained, and in operation at any time an affected facility for which the equipment and measures are designed is operated, except as provided by 401 KAR 50:055, Section 1.
   b. All the air pollution control systems shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers. A log shall be kept of all routine and nonroutine maintenance performed on each control device.
   c. A log of the monthly raw material consumption and monthly production rates shall be kept available at the facility. Compliance with the emission limits may be demonstrated by computer program, spread sheets, calculations or performance tests as may be specified by the Division [401 KAR 50:055, Section 2].

2. Pursuant to 401 KAR 52:040, Section 19, the permittee shall certify compliance with the terms and conditions contained in this permit by January 30th of each year, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an approved alternative) to the Regional Office listed on the front of this permit in accordance with the following requirements:
   a. Identification of the term or condition;
   b. Compliance status of each term or condition of the permit;
   c. Whether compliance was continuous or intermittent;
   d. The method used for determining the compliance status for the source, currently and over the reporting period, and
   e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.
   f. The certification shall be postmarked by January 30th of each year. Annual compliance certifications should be mailed to the following addresses:

Division for Air Quality Frankfort Regional Office 643 Teton Trail, Suite B Frankfort, KY 40601-1758	Division for Air Quality Central Files 803 Schenkel Lane Frankfort, KY 40601-1403

SECTION C – GENERAL REQUIREMENTS (CONTINUED)

3. Permit Shield - A permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with all:
   a. Applicable requirements that are included and specifically identified in this permit; or
   b. Non-applicable requirements expressly identified in this permit [401 KAR 52:040, Section 11].

G. Construction Requirements:

1. Pursuant to 401 KAR 52:040, Section 12(3), unless construction is commenced on or before 18 months after the date of issuance of this permit, or if construction is commenced and then stopped for any consecutive period of 18 months or more, or is not completed within a reasonable timeframe, then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon a written request, the Cabinet may extend these time periods if the source shows good cause.
2. Pursuant to 401 KAR 52:040, Section 12(4)(a) and 401 KAR 59:005, General provisions, Section 3(1), within 30 days following construction commencement, within 15 days following start-up and attainment of maximum production rate, or within 15 days following the issuance date of this permit, whichever is later, the owner and/or operator of the affected facilities specified on this permit shall furnish to the Regional Office listed on the front of this permit, with a copy to the Division's Frankfort Central Office, the following:
   a. Date when construction commenced, (See General Condition G.1).
   b. Start-up date of each of the affected facilities listed on this permit.
   c. Date when maximum production rate was achieved, (See General Condition G.3.b).

3. a. Pursuant to 401 KAR 59:005, General provisions, Section 2(1), this permit shall allow time for the initial start-up, operation and performance testing and/or compliance demonstration of the affected facilities listed herein. However, within 60 days after achieving the maximum production rate at which the affected facilities will be operated, but not later than 180 days after initial start-up of such facilities, the owner or operator shall conduct performance tests on the new equipment and furnish the Division's Frankfort office a written report of the results of such performance tests or demonstrate compliance to a duly authorized representative of the Division.

   b. Pursuant to 401 KAR 59:005, General provisions, Section 3(1)(b), unless notification and justification to the contrary are received by this Division, the date of achieving the maximum production rate at which the affected facilities will be operated shall be deemed to be 30 days after initial start-up.

   c. Pursuant to 401 KAR 50:045, Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test

SECTION C – GENERAL REQUIREMENTS (CONTINUED)

protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least Thirty (30) days prior to the test.

d. Pursuant to 401 KAR 50:045 Section 5 in order to demonstrate that a source is capable of complying with a standard at all times, a performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division for Air Quality may waive these requirements on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements.

4. Operation of the affected facilities authorized by this permit shall not commence until compliance with applicable standards specified herein has been demonstrated in accordance with the requirements of 401 KAR 52:040, Section 12(4)(b). Until compliance is demonstrated, the source may only operate for the purpose of demonstrating compliance.

SECTION D – INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:040, Section 6. While these activities are designated as insignificant the permittee shall comply with the applicable regulation and any level of periodic monitoring specified below.

	Description	Generally Applicable Regulation
1.	Waste Oil Storage Tank (1) – 4000 gallon capacity	N/A
2.	Cooling Towers (1 Hot Forge, 1 Powder Forge, 2 Warm Forge)	401 KAR 59:010
3.	Billet Coating Tank (1 – Warm Forging)	401 KAR 59:010
4.	Rust Proofing Tanks (1 – Powder Forge; 1 GM Line)	401 KAR 59:010
5.	Sinter Chamfering / Milling Process	401 KAR 59:010
6.	Warm Forge Sizing Press	401 KAR 59:010
7.	Graphite Mixing Tank	401 KAR 59:010
8.	Safety Kleen Parts Washers (6)	None
9.	Production Conveyors	401 KAR 59:010
10.	Production Equipment Using Coolant (Finishing & Cutting Dept)	401 KAR 59:010
11.	Various Hand Grinding Units	401 KAR 59:010
12	Various Small Heating Units	401 KAR 59:010